RISK ASSESSMENT

Anticipated risks in the proposed project are mentioned below:

Fall of sides: -

- Overall slopes angles of benches will be 45
- No disaster like land slide, flood or inundation or fire is anticipated as the height of benches shall be maintained at 3 m above water level.
- Unmanageable heights are not created.

Water

- Proper drainage will be maintained to eliminate inundation of working pits during rains from run-off water.
- Mining operations are not carried below the ground water table; therefore, there will be no disturbance to ground water quality due to mining activity.

Natural resource conservation: -

- A green belt will be developed so that minimum soil erosion takes place.
- The natural habitats of the existing flora and fauna will not be disturbed.
- Use of traditional knowledge in all aspects of conservation;
- Water conservation techniques will be employed.
- Time to time analysis of the soil, water resources etc will be done in analyze negative impacts of mining activities on the environment.
- To prepare management plans for village landscapes. Villages to be seen as landscapes of order to the diverse elements such as forests, scrub, grassland, streams/river, ponds etc. The dynamics of the village as an ecosystem to be assessed, corridors to be devised between major natural landscape elements, so as to facilitate movement of species.

Fire:-

Sufficient fire extinguishers will be installed at selected locations such as mine office, labour rest shelter etc. Besides, sufficient water hydrants with sufficient length of

hosepipes will be made available on the surface for fire protection.

Housekeeping:-

The provision and maintenance of a safe and healthy workplace is the most basic principle of health and safety. Dirty and untidy workplaces or walkways contribute to a very large proportion of trip and fall accidents. In the context of surface mining the provision of well-defined roadways.

and walkways clear of obstruction and regular cleaning up of spillage will greatly reduce the potential risk for this type of accidents.

The Work

The application of risk assessment depends upon a full understanding of all aspects of the job being undertaken. In carrying out a risk assessment in relation to a particular task the evaluation must include a review of the knowledge, experience and training of those persons carrying out the work.

HAZARD IDENTIFICATION AND RISK ANALYSIS

This deal with the hazards associated with various mining works during operation of the mine and can happen due to excavation, handling of material, machinery breakdown electric failures and natural calamities. It also presents the calculated frequencies of occurrence of different accident scenarios for the identified potential hazard occurrence.

Risk Reducing Measures based on the calculated frequencies and consequences.

IDENTIFICATION OF HAZARDS

TECHNOLOGICAL HAZARDS

Technological hazards may be due to intense noise during excavation/loading, transportation etc. fire in the excavator, and road mishap.

STRUCTURAL FAILURE

Structural failure is associated with the failure of slope, it can be bench fall, slope failure due to undercutting and fall of machinery and workers due to fall of bench/slope, any of the said activity can cause major injury and fatalities.

LANDSLIDES

The rock becomes such situation win the mineral causing cracks and opening in

natural binding. Such loose may fall at any time causing damage to human life and machinery. Only remedy to the effect of such situation will dress the loose part. Beside it, all necessary precaution will be taken as per Reg.115 (1) of MMR 1961 to avoid any disaster.

SUBSIDENCE FLOOD

The area devoid of any perennial water course. The water accumulated in the pit is not much or cause the disaster.

SCENARIOS CONSIDERED FOR RISK ASSESSMENT

KNOWLEDGE OF WORK

The application of risk assessment depends upon full understanding of all aspects of the job being undertaken. In carrying out a risk assessment in relation to a particular task, the evaluation must include a review of the knowledge, experience and training of those persons carrying out the work.

PERSONAL COMPETENCE

It follows that the knowledge, experience and training of personnel involved in work is critical to evaluate any risk assessment. A knowledgeable, experienced well-trained and competently supervised workforce will be at a lower risk of accidents occurring than a poorly trained and badly supervised workforce.

CO-ORDINATION

It is essential that the coordinator ensures that everyone engaged in the work is capable and understands the role of others and their responsibility for each other.

HEALTH HAZARDS

Health hazards are associated with the dust and noise, it is necessary to quantify the key pollutants during surface mining operations that may result into health hazard.

SURFACE FIRE

No surface fire is involved in the mining operation. The forest fire may occur due to dry leaves and wood in vegetated part and result in a disaster. In the area under reference, there is no such situation and there is no danger of forest fire. No, oil grease, canvas or other inflammable material will be stored in mine except in a fire-proof receptacle.

LOADING

There will be no risk associated with the activity. However, precautions will be required to be taken to remove workers away from the loading operations, to avoid any fall of material on persons. Also, the loading operations will be supervised by a site supervisor for properly guiding the loading machine operator.

PIT SLOPE FAILURE

The sides of the mine benches will be suitably sloped to avoid bench failure. The bench height is planned to be kept 2-3m height with width more than the height of the bench. The bench sides and edges will be regularly inspected for any signs of failure, development of cracks, etc. Due precautionary measures will be adopted to avoid any bench or pit slope failure.

HEAVY VEHICLES

Proper care will be taken while loading and transportation of mineral and overburden. Good maintenance and regular testing will be done to avoid any mishap.

TAILING AND DAM FAILURE

There is no tailing dam involved in mining and allied activities. No emergency plan is proposed for quick evacuation and ameliorative measure because there is no need of as such plan.

TRAFFIC MOVEMENT

The mining operation will be of small scale and the machinery proposed to be used for mining is less in number, therefore there will be no risk of accidents due to the traffic movement. However, haulage roads will be properly maintained and the speed limits will be implied on the vehicles plying for mineral transport to avoid accidents.

1.1 Disaster Management Plan

There is hardly any risk in mining. However, as a precautionary measure if any disaster occurs within the mining area, the first aid facility of the mine will immediately handle the situation and if required victims will be shifted to the primary health center.

Out Line of Disaster Management Plan

No drilling and blasting is involved, so no risk due to explosive material is anticipated.

High risk factors such as Earthquakes. Landslide, Subsidence, Flood, Fire etc are not encountered nor anticipated during proposed period. Also, no local habitant exists as the working area is far away from the locality.

System of communication

An internal communication system for the department head and to their line of command should be maintained. Having the telephone nos, and addresses of adjoining mines, rescue station, police station, Fire service station, local hospital, electricity supply agency and standing consultative committee members is another essential aspect.

Consultative committee

A standing consultative committee will be formed under the head of Mines manager.

Facilities & Accommodation and facilities for medical aid, rescue room, etc will be provided.

First Aid & medical facilities

The mine management is having first aid facilities for use in emergency situation. All casualties would be registered and will be given first aid. The mine management will have proper telephone/wireless set for quick communication with nearest hospitals where the complicated cases are to be sent.

Care and maintenance during temporary discontinuance

In case of any unforeseen circumstances, if the mining operations are to be suspended temporary, following action will be initiated:-

Fencing of the pits.

Display of notice at strategic points GAO-ENY Security on red alert for 24 hrs.

Emergency Plan:-

On realizing anything serious happened anywhere in the mine, supervisory staff will immediately inform the nearest mining official & the manager of mines.

On receiving information of emergency, Shift in-charge will ensure that all the materials and transport system to deal with emergency situation is kept under readiness. First aid facilities to be kept ready to receive the cases.

Under Covid -19 following precautions will be done:-

- Temperature of employees will be checked by Thermometer Gun twice a day and log book for the same will be maintained. V Face protection shields along with masks and PPES and along with sanitizer will be provided.
- Gloves, masks N-95 and hand sanitizers will be provided.
- Social distance will be maintained.
- It is ensured by PP that the updated guidelines of MHA in content of Covid -19 will be followed during Mining operation at Mining site.

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